

TRANSMITTAL LETTER

In re Application of
LARRY L. BRADFORD et al.

Serial No: 09/392,434

Filing Date: September 9, 1999

Title: POLYURETHANE FOAM CONTAINING
FLAME RETARDANT BLEND OF
NON-OLIGOMERIC AND OLIGOMERIC
FLAME RETARDANTS



Docket No: ACA 6124 US

Examiner: R. Sargent

Group Art Unit: 1711

CERTIFICATE OF MAILING

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Assistant Commissioner for Patents,
Washington, DC 20231

on February 28, 2002

Lynn Brush
Lynn Brush

Assistant Commissioner for Patents
Washington, D.C. 20231

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1. TRANSMITTAL LETTER IN DUPLICATE;
2. APPEAL BRIEF WITH APPENDIX IN TRIPLICATE;
3. CERTIFICATE OF MAILING; and
4. POST CARD

☐ Applicant hereby petitions for an extension of time under 37 CFR 1.136 of:

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Respectfully submitted,

Richard P. Fennelly
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Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPEAL BRIEF

This is an appeal from the Final Rejection of Claims 1-3, 5-11,
and 13-14, dated September 4, 2001, as modified by the Amendment
Under Rule 116, which cancelled Claims 4 and 12.

The text of the current rejected Claim set is reproduced in the
Appendix attached to this Appeal Brief.

REAL PARTY IN INTEREST

The real party in interest for this Appeal is Akzo Nobel N.V.,
Arnhem, The Netherlands.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences to the instant appeal.

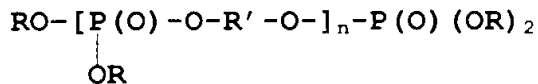
STATUS OF AMENDMENTS

All Amendments have been entered in the instant application, including an amendment that was filed after Final Rejection and that resulted in removal of certain grounds of rejection under Section 112.

SUMMARY OF INVENTION

The present invention relates to a polyurethane foam that contains an effective amount for flame retardancy of a flame retardant blend consisting essentially of: (a) a non-oligomeric, non-halogenated, alkyl group-containing phosphate ester flame retardant; and (b) an oligomeric, non-halogenated organophosphorus flame retardant having a phosphorus content of no less than 10%, by weight, and at least three phosphorus atom-containing units therein.

The preferred phosphate ester for use is an oligomeric organophosphate of the formula:



where n, on a number average basis, ranges from 2 to 20, and R is selected from the group consisting of alkyl and hydroxyalkyl, and R' is alkylene.

ISSUES

The following issues are presented in this Appeal:

1) Whether the Examiner was correct in rejecting now pending Claims 1-3, 5-7, 9-11 and 13 under 35 U.S.C. §103(a) as unpatentable over the Sicken (U.S. Patent No. 5,985,965) or Fearing (U.S. Patent Nos. 4,199,534 or 4,268,633), each in view of Keppeler (U.S. Patent No. 5,981,612); and

2) Whether the Examiner was correct in rejecting now pending Claims 7 and 13-14 under 35 U.S.C. §103(a) as unpatentable over the Sicken (U.S. Patent No. 5,985,965) or Fearing (U.S. Patent Nos. 4,199,534 or 4,268,633), each in view of Keppeler (U.S. Patent No. 5,981,612), as applied against now pending Claims 1-3 and 5-7, above, further in view of Hardy (U.S. Patent Nos. 4,382,042 or 4,458,035).

GROUPING OF CLAIMS

For purposes of the current Appeal, now pending Claims 1-3, 5-7, 9-11 and 13 stand apart from now pending Claims 7 and 13-14 in view

of the Examiner's articulation of two separate grounds of rejection for each set of Claims.

ARGUMENT

The obviousness rejection of Claims 1-3, 5-7, 9-11 and 13 as unpatentable over Sicken or either of Fearing in view of Keppeler should be reversed by the Board for the following reasons:

- While the cited Sicken patent shows applicants' recited oligomeric component (b), this cited primary reference is utterly devoid of any *clear suggestion* of the selection of recited component (a) in Claim 1, which is a non-oligomeric, non-halogenated, alkyl-group containing phosphate ester. The Sicken patent contains only one, very vague indication at Col. 4, line 32 that its oligomeric flame retardants can be employed, if desired, "as a mixture with other flameproofing agents". There is no further direction supplied by Sicken as to what type of "flameproofing agent" is to be additionally selected. Clearly, Sicken only provides to the person of ordinary skill in the art an invitation to experiment and does not provide the

type of suggestion needed to support either of the instant rejections¹.

- The Fearing references also fail to provide a sufficient basis for either rejection if considered. Like Sicken, they vaguely state that their particular flame retardants can be "... used in combination with other flame retarding agents" Again, there is no direction as to what type of agent is to be selected from the vast array of choices that might be presented to the person of ordinary skill in the art!
- In an effort to cure the aforementioned deficiencies of each of the primary citations (Sicken or either Fearing patent), the Examiner has additionally cited the Keppeler patent to allegedly suggest the particular selection of applicants' recited non-oligomeric, non-halogenated phosphate ester. However, this patent provides such a long list of possible choices stretching from Col. 7, line 33 to Col. 8, line 67 that it really affords no clear teaching or even suggestion of making such a specific choice. In fact, the section of this reference at Col. 8, lines 7-11 gives "preference" to "aminomethylated phosphonic acid esters" which are, like the Fearing teaching previously

¹ The large number of possible choices shown by the Keppeler patent at Col. 7, line 33 to Col. 8, line 67 illustrates the applicants' contention of lack of suitable

described, "phosphonates" rather than "phosphate esters", as now required. Any fair reading of Keppeler would, if anything, induce the person of ordinary skill in the art to move in the direction of selecting phosphonate flame retardants, rather than the required type of phosphate ester².

In view of the comments just made, the Board is requested to reverse the first obviousness rejection that the Examiner has interposed in the Final Rejection.

The second obviousness ground of rejection that the Examiner has interposed, utilizing the further citation of the Hardy patents, should also be reversed since the additional citation of the Hardy patents does not cure the deficiencies noted for the references used by the Examiner to allegedly support the underlying (first) ground of rejection.

- The previously articulated argument as to why Sicken, Fearing and Keppeler do not show the major outlines of what is articulated as the basis for the invention recited in Claims 7 and 13-14 is incorporated herein by reference.

direction by Sicken.

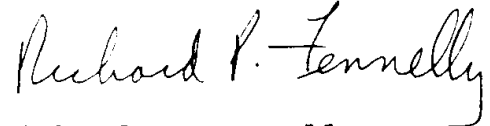
² Col. 8, lines 53-62 of Keppeler list what it characterizes as being " [s]uitable additional flame proofing agents (emphasis added)", clearly implying that they are not intended to replace the selection of the preferred aminomethylated phosphonate species that have been identified by the applicants as being the choice that the

➤ The applicants deem that the additionally cited Hardy patents would *not* cure the previously discussed deficiencies of Sicken, Fearing and Keppeler. Moreover, the primary citation to Sicken, at Col. 2, lines 12-31, specifically mentions the Hardy '035 patent and identifies certain of its *disadvantages* at lines 26-31. No person in the art would therefore think of combining any suggestions that he or she might glean from examination of either of the Hardy patents in view of this apparent denigration of that earlier work by Sicken! Clearly, combining Sicken with either of the Hardy patents is based on an improper hindsight reconstruction of the prior art on the part of the Examiner since Sicken, if anything, teaches against such a combination by its denigration of the Hardy approach. It is well settled that a determination of obviousness must involve more than indiscriminately combining prior art --- a motivation or suggestion to combine such prior art *must* exist. See, for example, ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

person of ordinary skill in the art would make if the primary art and Keppeler were to be consulted.

Reversal of both obviousness grounds of rejection that have been interposed against the pending Claims is requested in view of the comments contained herein.

Respectfully submitted,

A handwritten signature in cursive script that reads "Richard P. Fennelly". The signature is written in dark ink and is positioned above the printed name and title.

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